



CLEAN VERSION OF THE AMENDED CLAIMS

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1. A built-up camshaft comprising
a pipe coated by a jointing coating on an outer cylindrical surface and an
inner cylindrical surface and having an outer pipe diameter and an inner
pipe diameter and having cam places, bearing ring places and pipe end
places;
cams formed as rings with an outer cylindrical flange and an inner
cylindrical flange and provided with the jointing coating on an inner
cylindrical surface of the inner cylindrical flange and positioned at the cam
places and bearing rings provided with the jointing coating on inner
surfaces being in contact with the pipe and positioned at the bearing ring
places and end pieces provided with the jointing coating on outer
cylindrical surfaces and having an outer end pieces diameter bigger than
the inner pipe diameter, wherein the jointing coating of the pipe and the
jointing coating of the cams, the bearing rings and the end pieces create
durable joints between the pipe and the cams, the bearing rings and the end

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pieces and wherein the surface coating prevents a tribocorrosion and increases load capacity as compared to conventional compression joints.

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Cams*
D2

6. A built-up camshaft comprising a pipe coated with a crystalline phosphate coating on an outer cylindrical surface and on an inner cylindrical surface and having an outer pipe diameter and an inner pipe diameter; cams and bearing rings and end pieces having an outer diameter bigger than the inner pipe diameter and connected by means of compression joints to the pipe and provided with the crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints and creates stable joints between the pipe and the cams, the bearing rings and the end pieces.

7. A built-up camshaft comprising

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a pipe coated by a cement on an outer cylindrical surface and an inner cylindrical surface and having an outer pipe diameter and an inner pipe diameter;

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cams and bearing rings and end pieces having an outer diameter bigger than the inner pipe diameter and connected by means of compression joints to the pipe and provided with the cement on surfaces being in contact with the pipe, wherein the cement prevents a tribocorrosion and increases load capacity as compared to compression joints.

(4)
9. A built-up camshaft comprising

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a pipe coated with a crystalline phosphate coating on an outer cylindrical surface and having an outer pipe diameter;
a cam having an inner diameter larger than the outer pipe diameter and connected by means of a compression joint to the pipe and provided with the crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints and creates a stable joint between the pipe and the cam;

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last*

a bearing ring having an inner diameter larger than the outer pipe diameter and connected by means of a compression joint to the pipe and provided with a crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints and creates a stable joint between the pipe and the bearing ring;

an end piece having an inner diameter larger than the inner pipe diameter and connected by means of a compression joint to the pipe and provided with a crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints and creates a stable joint between the pipe and the end piece.

10. A built-up camshaft comprising
an elongated part having an outer cylindrical surface;
a cam connected by means of a longitudinal compression joint to the elongated part, wherein the cam is covered with a joint-stable surface

cam

coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints; a bearing ring connected by means of a longitudinal compression joint to the elongated part, wherein the cam is covered with a joint-stable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints;

D3 out

an end piece connected by means of a longitudinal compression joint to the elongated part, wherein the cam is covered with a joint-stable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints.

11. The camshaft according to claim 10, wherein
the coating (2, 5) is a metal coating or a cement coating.

12. The camshaft according to claim 10, wherein
the pipe or the solid rod and/or the cams, the end pieces, the bearing rings,
and the other parts are made out of metal, ceramics, plastics or other

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cont*

materials, by cutting or non-cutting, by milling or forging in massive or profiled form.

*B3
cont*

13. The camshaft according to claim 1, wherein the outer jacket face of the pipe or of the solid rod has a drawn quality or is completely or partially mechanically machined.

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14. The camshaft according to claim 10, wherein the elongated part having an outer cylindrical surface is a pipe.

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15. The camshaft according to claim 10, wherein the elongated part having an outer cylindrical surface is a solid rod.

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10. A built-up camshaft comprising a pipe or a solid rod, cams, bearing rings, end pieces, and

(3) cam

other parts, wherein the cams (3), the end pieces (6), the bearing rings, and the other parts are connected by means of longitudinal compression joints to the pipe or to the solid rod, wherein the parts to be connected are provided with a suitable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to conventional compression joints.